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Global Prevalence of Various Chronic Disease: A Mini Review

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Overview

Since the word "disease" refers to a wide range of conditions, it is difficult to define in a single way. Diseases are structural or functional abnormalities that are frequently typified by particular symptoms. They may be brought on by internal dysfunctions like autoimmune diseases or external ones like infections. Diseases can range in severity from minor to fatal, impairing a person's capacity to carry out their social obligations.

Heart-related conditions

Globally, cardiovascular diseases (CVDs) are the primary cause of death and morbidity, and their prevalence is rising (1). From 0.061% in 2010 to 0.070% in 2019, the prevalence of CVDs increased globally, with rates typically higher for women than for men. Globally, there were 523 million common cases of CVD by 2019, almost doubling from 1990. The two main causes of the burden of CVD are ischemic heart disease and stroke (2). With regional variations in prevalence, cardiomyopathy continues to be a major global health concern. The prevalence of Chagas cardiomyopathy is still highest in Latin America, despite a decline from 5.23 to 3.42 cases per 100,000 people worldwide between 1990 and 2019 (3). In the treatment of cancer, doxorubicin-induced cardiotoxicity is a serious issue that can impact both adults and children. It was predicted that 50,000 childhood cancer survivors would experience this illness by 2020. As cancer survival rates rise, late-onset toxicity is becoming more common. The development of cardiotoxicity may be influenced by a number of risk factors, such as age, sex, ethnicity, and pre-existing cardiovascular conditions (4,5,10).

Disorders of metabolism

Over the past 20 years, metabolic disorders have become much more prevalent worldwide, with obesity and diabetes being the most prevalent. All metabolic disease prevalence rates rose between 2000 and 2019, especially in nations with high sociodemographic indices. Between 1975 and 2016, the prevalence of obesity almost tripled globally, impacting children and adults from all socioeconomic backgrounds. The prevalence of metabolic syndrome (MetS), a collection of linked risk factors that predict diabetes and cardiovascular diseases, varies from 10% to 84% based on a number of variables. Mortality rates for type 2 diabetes and obesity did not change, but they did decline for certain metabolic conditions (6,28). The prevalence of diabetes mellitus is sharply rising globally, making it a growing global health concern. By 2030, there will likely be 552 million diabetics, up from an estimated 347 million in 2012 (7,29). A growing number of people around the world are concerned about nonalcoholic fatty liver disease (NAFLD) and its more severe variant, nonalcoholic steatohepatitis (NASH). NAFLD is thought to affect 25.24% of people worldwide, with regional differences ranging from 24% to 41.12% for men and 37.32% for women. Global estimates of NASH prevalence range from 1.5% to 6.45% (8,9,11,31).

Neurological conditions

With over 40% of the world's population affected and 443 million disability-adjusted life years (DALYs) in 2021, neurological disorders represent a serious global health concern. Between 1990 and 2019, the prevalence of these disorders has grown, especially for non-communicable diseases like Parkinson's and Alzheimer's. Neonatal encephalopathy is the second most common cause of neurological DALYs and deaths, after stroke (12). With estimates ranging from 26.6 million in 2006 to 51.6 million in 2019, the prevalence of Alzheimer's disease and related dementias is rising quickly worldwide. By 2050, the number of cases is expected to quadruple, reaching 115–135 million people globally (13, 27). The prevalence of Huntington's disease (HD) varies greatly across the globe, with lower rates in Asia than in Europe, North America, and Australia. According to a meta-analysis of research conducted between 1985 and 2010, the prevalence worldwide was 2.71 per 100,000. A higher prevalence of 4.88 per 100,000 was discovered in an updated review that included studies conducted up until 2022 (14). About 51.7 million people worldwide suffer from epilepsy, a common neurological condition with an annual incidence of 61.44 per 100,000 person-years and an active prevalence of 6.38 per 1,000 persons. Low- and middle-income nations have higher rates of epilepsy incidence and prevalence, with Latin America and Africa having the highest prevalence rates (17, 18, 32).

Gastrointestinal conditions

A large-scale multinational study found that about 40% of adults worldwide suffer from functional gastrointestinal disorders (FGIDs). Functional constipation is the most prevalent disorder among children and adolescents, with a global prevalence of about 23% (15). Despite a decline in agestandardized prevalence rates, the number of cases of peptic ulcer disease (PUD) worldwide rose from 6.4 million in 1990 to 8.1 million in 2019. Oneyear prevalence rates were between 0.10% and 1.50%, and annual incidence rates varied from 0.03% to 0.19% (16,23).

Cancer

With an estimated 28.8 million cases in 2008 and 19.3 million new cases predicted each year by 2025, the prevalence of cancer is rising at an alarming rate worldwide. With more than 1% of the population afflicted, North America, Western Europe, and Australia/New Zealand have the highest prevalence. The most prevalent cancer in the world is lung cancer, which is followed by colorectal, prostate, and breast cancers. Regional variations exist in prevalence patterns, though, with stomach cancer predominating in Eastern Asia and cervical cancer in sub-Saharan Africa and Southern Asia (19,30).

Fibrotic condition

Despite being uncommon, idiopathic pulmonary fibrosis (IPF) is becoming more commonplace globally. According to recent studies, the prevalence of IPF ranges from 0.33 to 4.51 cases per 10,000, while the global incidence is estimated to be between 0.09 and 1.30 cases per 10,000. Geographically, incidence and prevalence rates differ; North America and Europe have higher rates than Asia and South America. IPF has become more common over time, especially in older men. According to estimates, 19.5% of patients with type 2 diabetes mellitus worldwide have advanced fibrosis, with notable regional differences (20,21).

Autoimmune diseases

Autoimmune diseases are becoming more common worldwide, according to recent studies. In more recent analyses, estimates have risen from 3.2–5.3% in previous studies to 7.6–9.4%. The estimated prevalence is 4.5% overall, with females having higher rates (6.4%) than males (2.7%). Globally, rheumatic, endocrinological, and gastrointestinal autoimmune diseases exhibited the largest increases, with mean annual increases of 19.1% in incidence and 12.5% in prevalence, according to a systematic review. But a recent study that looked at a number of autoimmune diseases from 1990 to 2019—including psoriasis, multiple sclerosis, inflammatory bowel disease, and rheumatoid arthritis—found different patterns. The other diseases exhibited declining trends, with notable variation across nations and continents, while the prevalence of rheumatoid arthritis rose globally (22).

Conclusion

Healthcare systems are under pressure due to the prevalence of diseases, particularly autoimmune conditions, which calls for additional funding and creative treatment strategies (24). Past pandemics, like COVID-19, have altered social norms and behaviors, emphasizing the connection between illness and social transformation (25). Even though the detrimental effects of illnesses on society are widely known, some research indicates that some illnesses may actually promote community support and resilience, pointing to a complicated relationship that needs more investigation (26).

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